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CONTENTS


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 **Weight Loss and Fasting**
Sam and Mitch Asser with Jason Fung, MD
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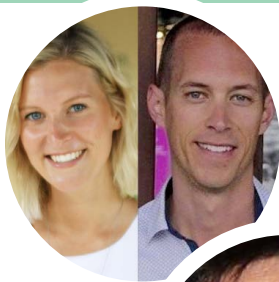
 **Intermittent Fasting and Cyclic Feeding**
Sam and Mitch Asser with Daniel Pompa, PScD
[Click here to watch this interview!](#)

 **Fasting for Health and Healing**
Sam and Mitch Asser with Joel Fuhrman, MD
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Weight Loss and Fasting

Sam and Mitch Asser with Jason Fung, MD

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Sam Asser: Hello, Dr. Jason Fung and welcome to The Fasting Summit. Thank you so much for joining me.

Dr. Jason Fung: Thank so much, thanks for having me.

Sam Asser: Now, I'm excited about this chat because this is going to be a very pressing topic that a lot of people bring up when it comes to fasting and when it comes to their health in general. And I know that you're a big a believer when it comes to looking after your kidneys, when it comes to looking after diabetes, we need to start at the root cause which is often a lot weight issues that people are going through. And so, my first question for you today is why is fasting good for weight loss?

Dr. Jason Fung: Well, it seems kind of obvious that if you don't eat, you're going to lose weight. And that's one of the things that is you really can't deny it. What people try and say, of course, is that's really unhealthy for you or it's going to backfire in the long-term. But the fact that it works, you really can't deny because it's just no food coming in. Your body's got to burn something. And it's going to burn your stores of food energy, which is sort of glycogen in the liver and also body fat.

So, it's interesting because many people have used it for thousands of years. It's part of sort of every major religion in the world. And people have always used it because it sort of makes a lot of sense. It's only been in last about 30

or 40 years where people have started to say that, "Well, you can't fast and that's really bad for you." And there's sort of all of these myths that have come up around it that you're going to go into starvation mode, and you're going to burn all of your muscle, and all of these things.

And it's like, well, what happened to the people 2,000 years ago who didn't have anything to eat? Did their muscles just shrivel up? Like all of those Native Indians in the Americas or in the natives of Australia, for example, who had these feast/famine cycles where they wouldn't eat for several days. Of course, they're just little balls of fat, right? It's like, no, they're lean and muscled and all of this sort of stuff.

And it's only been in the last sort of 30 years that there's real turnaround where people would say, "Well, you can't do it" even though we've been doing it for thousands of years and we tell people to do it. That is if you look at the Muslims for example, they'll tell people there's a holy month of fasting. During Lent for example in the Catholic religion, there'll be days of fasting. Good Friday, and so on, and Greek Orthodox religion and Mormonism, Hinduism, Buddhism.

So, everybody has not only done it, because sometimes food wasn't available, they've actually specifically told people to do it. That is literally billions of people throughout all of human history have been told, have been instructed to fast, and it's not been in this sort of negative way. It's been sort of this cleansing, this detoxification, this healthy practice of sort of getting rid of all of the excess sugar in your body.

And the real sort of conundrum is why we turned against it. And I think that it's been because the agenda's been pushed by sort of advertising and food companies. And they've been able to convince dietitians and doctors that this is something really, really unhealthy for you.

I mean, even the word itself, breakfast, is the meal that breaks your fast. That means you have to fast every day because if you're not fasting you can't break your fast.

So we went from the 70s from this idea that fasting was acceptable, it was good, it's part of everyday life. And then okay, usually once a year, a couple times a year you do a longer fast and really cleanse your body, to this sort of idea 40 years down the line that everybody should be stuffing their faces every two hours with some crackers and muffins in order to stay healthy. And in that same time, obesity has sort of skyrocketed.

So obviously if you don't eat, you'll lose weight, but more than that you're going to be able to

lower your insulin, which is the main thing. Insulin, it goes up, whenever you eat, assuming that you eat sort of a balance meal of macronutrients. Anything you eat will stimulate insulin. Not to the same degree of course. Eggs for example are not going to stimulate insulin to the same degree that for example white bread does. But everything in general if it has a mix of stuff is going to stimulate insulin, so lowering insulin, because you're not eating, is a way for you to access your stores of body fat.

And so, if you're trying to burn body fat, there's really nothing better, and there's nothing harmful. And there's where I go a lot into in my talks, and my lectures, and my books, and so on. I go into a lot of myths of fasting and why they're not actually true, the physiology of fasting, what actually happens in the body and why it's actually maybe actually quite beneficial for you.

Sam Asser: How can people know more about going into fat burning opposed to just burning glucose?

Dr. Jason Fung: So fat burning is mostly determined by insulin for the most part, which is a nutrient sensor. So, your body needs to know if there's nutrients coming in. So, your body really only exists in one of two states, the fed state or the fasted state. And the fed state insulin is high. So, you eat, insulin goes up, and this is signal to the body to go into the fed state. Which means that you want to store food energy. You store it as glycogen which is glucose in the liver, and you store it as body fat.

If you eat a lot of protein, more than you need, your body really can't store a lot of protein. So it does have a little bit of excess protein. But it doesn't have a lot, so it will store the excess. It will change it into glucose and then store it as glucose. Or if there's too much

glucose, then it will turn it in a process called de novo lipogenesis, into fat.

So, if you want to get into fat burning, you can't be stimulating insulin, because insulin puts you in the fed state. You're trying to store food energy. This is a normal thing, remember. So, if you're eating insulin goes up, you're in the fed state.

You should be trying to store food energy. Because when you don't eat, when you're in the fasted state insulin falls, which is the signal for the body to start burning some of that stored food energy. And that's the reason you don't die in your sleep every single night. It's because you have this sort of ebb and flow of everything.

If you want to lose weight then you need to burn food energy, you can't be storing it. Because that's all body fat is, it's a store of food energy. That's what it's used for. That's what it's designed for. So, if you keep eating, you're not going to be able to burn your body fat because we say that insulin inhibits lipolysis, which is a fancy word for saying fat burning. So, insulin, if it goes up, it blocks fat burning, because you want to be storing fat not burning it because you can only store it or burn it. You can't do both at the same time.

So, this is the thing about fasting is that it's a quick way to lower insulin. By lowering insulin, you allow your body to have access to the stores of body fat. And this is one of the reasons, for example, that people talk about starvation mode, and dropping their basal metabolic rate. And this is one of the reasons it doesn't happen so much in fasting compared to calorie restriction. So, if you simply cut the fat, restrict your calories but eat ten times a day, you're still stimulating insulin all the time and therefore, keeping

your body in the fed state rather than the fasted state.

You need to be in the fasted state to burn that energy. So, if you can lower your insulin, then you allow your body to burn some of that food energy. So that's fat burning. So that's why low carbohydrate diets, and Ketogenic diets also have the main effect of lowering insulin. Because you restrict the food which is refined carbohydrates which is highest in insulin affect. Also, sugar and so on.

As opposed to the old fashion advice of cutting fat, which really doesn't have much insulin affect. So, if you're not affecting insulin, you're not affecting whether the body is in the fed state or the fasted state. Therefore it really has not a great effect on weight loss.

The other issue you touched on was the autophagy, which is actually a way of the body has of breaking down protein. And this is more to do with wellness. So, when you eat protein, your body breaks it down into amino acids, which are these building blocks. And it uses them to build more protein. Any excess gets converted into glucose, which can then be stored and converted further into fat.

If you're not malnourished, it's estimated that 50 to 70 percent of the protein that you eat actually winds up turning into glucose. Okay, so if you're very malnourished, if you're sort of one of these prisoners of war in WWII Japan, like 100 percent of that protein is going to go towards building protein. But if you're sort of a regular person in the western world who is not particularly malnourished, if you're not anorexic, if you're not a cancer victim for example, then an average of 50 to 70 percent. But it kind of depends of course on your underlying muscle stores. A lot of that protein is just going to get

turned into glucose.

Autophagy is a process which has just been recently sort of decoded, and it has to do with something called mTOR, which is another nutrient sensor. But it's more specific for protein. If you don't have enough protein then mTOR is going to go down, if you have a lot of protein, mTOR is going to go up. And when the body senses that it's not getting enough protein it starts to break down some of these sub-cellular parts, and use it for energy and use it to rebuild other proteins.

So why it's particularly interesting is because everybody thinks that growth is a good thing. In adults, growth is generally not a good thing. So, if you are a child, growth is good because you need to grow from sort of seven pounds at birth to 180 pounds or whatever you're going to be at your adult weight. But as an adult your liver shouldn't be growing, your lungs shouldn't be growing, your brain shouldn't be growing, nothing should be growing.

And any time you grow, it's probably a bad thing. If you're gaining weight, that's excessive growth. If you have cancer, that's a disease of excessive growth, if you have a lot of atherosclerosis—that's sort of blockages of the arteries—that's excessive growth, again. So, growth is not good.

And one way to turn down those growth signals is to really restrict these nutrient sensing pathways, because your body will not grow if there are not the available nutrients for it. So, insulin is sensitive for carbohydrates, but mTOR is sensitive for protein.

So, as you fast, as you don't eat any sort of protein or carbohydrate for about 24 hours or so, 16 hours up to maybe 36 hours, your body's actually going to start to breakdown

protein. Which everybody thinks is a really bad thing. And that's where you get these myths, "Oh, you're going to lose all of your muscle." It's not. First, you're burning protein, not muscle. There's a lot of excess protein in the body that needs to go. If you're losing weight, you need to burn off all that connective tissue, the collagen, the skin, all of that needs to be burned off. So, there's a lot of excessive protein.

Again, if you compare obese people to normal people, they have about 20 to 50 percent more protein than a lean person. So, there's the excess skin, the excess connective tissue and so on. So, you don't want more protein. So, one way to really kind of break that all down is through this process of autophagy. And people think it may play a role in preventing Alzheimer's disease, may help play a role in preventing cancer, for example. All of these sort of really interesting affects that you can't get simply with weight loss you can get with fasting.

So, there's sort of these multiple pathways. As you don't eat... So as your insulin falls, you get this counter-regulatory hormone surge, which means that growth hormone goes up. So, nothing turns off growth hormone as fast as eating. When you don't, eat growth hormone goes up, which you think, "Well, that's really strange. Why would you want to grow when there's nothing to eat?"

And the reason is that it prepares you so that as you're breaking down your protein, what you're doing is you're breaking down this old junky, old protein that you don't really want. Then when you eat again, the growth hormone is high and you rebuild all of this protein.

But what you've done in essence is you've done a complete renovation cycle of your body's proteins. So, you if you renovate your bathroom,

the first thing you've got to do is rip out that avocado green sink that was from the 70s, right, that's got to go. If you don't replace that, if you don't get rid of it you can't put a new one in its place. So, the first thing is breaking down.

The body is the same way. The first thing you've got to do is break it down, then you rebuild. And that is much better than keeping the old stuff there. So, the autophagy is this sort of renewal cycle of protein that only happens once you get into that sort of protein burning stage and replacement of old protein with new protein, which can be very powerful, and maybe one of the reasons sort of everybody has always considered doing a longer fast.

Again, looking at religions, this sort of wisdom of ancient people. One of the things they did when they had enough food was say, "Hey, once a year we should not eat so much so just to cleanse our bodies." And guess what, they were probably more correct than we know. Because they were actually getting rid of not just the excess glucose that's making us diabetic, the excess fat that's causing obesity, but they're also getting rid of this excess protein that may be causing things like cancer and Alzheimer's, and all of this other disease. So, in fasting you have sort of this very, very powerful method, which is completely free and completely accessible, and anybody can do it, and it's available. But it's this very, very powerful method now of not only losing weight and also preventing type II diabetes, because again if you don't eat your sugars will come down. But also, of maybe preventing all of this other chronic disease that we don't even really know about yet. But has sort of intense potential, sort of more potential than any sort of known drug that's out there.

Sam Asser: So incredible, isn't it? And so, whilst we're on the topic of that, does somebody need to extend fast or can they get this state by doing intermittent fasting daily? Or what's the best kind of approach that someone needs to give that fasted state?

Dr. Jason Fung: So, the fasted state really gets – so if you look at a fast it's really just defined as any time you're not eating. So, sort of that's just the way it is. You're still digesting food. So if you look at... Say you finished dinner at 7:00 p.m. for example. You're still digesting your food. Your insulin is still high, it's not going to drop the minute you stop eating. It's going to take a couple of hours, two to three hours.

Insulin starts to fall because you stored the food in the stomach and it slowly gets partitioned out to the intestines. So, you're still digesting the food three or four hours after that. But by about three or four hours then that has been digested, now your insulin starts to fall. And that's where you're starting to get into that fasted state.

So, it goes fairly quickly. So, if you can do sort of a 12 hour/14 hour fast overnight, which is what people used to do. They finished eating at sort of 6:00 p.m. they ate at around 8:00 a.m., so it's like a 14 hour fast every single day. You're going to balance sort of being in the fed state and fasted state. And therefore, you're going to spend sort of ten hours, ten to twelve hours storing food energy, and 12 to 14 hours burning food energy, perfect.

We've gone from that, which is the 1970s' sort of style and remember they're eating white bread and jam, and they're eating ice cream in the '50s and '60s, and there's just not a lot of obesity. The difference is they're only eating three times a

day with no snacks.

Now if you go to 2004/2005, the average number of times people eat is closer to six. A couple of years ago they measured how often people were eating and they broke it into sort of deciles. So, the ten percent of people who ate the least frequently as 3.3 times. So, if you only ate three times a day, that was less than 90 percent of the population. And the top ten percent of people who ate the most time, they averaged 10.3 times per day. So, in essence what we're doing is we're staying in the fed state constantly from the minute we get up to the minute we go to bed. And we're wondering, "Hey, why are we so fat?" It's because you're telling your body by eating ten times a day, you're stimulating insulin ten times a day and you're giving your body the instructions ten times a day to store fat. You can't do that.

And what's worse is that this is sort of generally accepted dietary wisdom. This isn't something that people decided to do. This is something that medical professionals have told them is good for you. So, we've entrenched it in our schools. My kids are a bit older now. But a few years ago, you look at the schedule, they'd eat breakfast, and if you didn't eat breakfast, boy, you were a bad parent.

So, you ate breakfast, then they had a little snack in the middle of the morning. Then they had lunch, and then after school they had a little snack, and then they had their dinner. And then when they're playing soccer, parents thought it was a great idea to give some juice and cookies in the middle of soccer. I mean are you kidding me? That's six times a day every single day. That's just regular. That's not including any snacks they take when they get home, and the Gatorade and all of this other stuff

that they make take otherwise.

So, we entrenched this idea that you should eat all of the time, and it's actually probably, I think, one of the biggest factors in causing the obesity epidemic. You need to eat less times. Because when you don't eat, then your insulin is going to fall. You're going to give your body the instruction to start burning that food energy. We used to call it just digest. Make sure you have time to digest your food. And it's true. Like this is not like some newfangled stuff I'm coming up with.

I'm just trying to push people back to like the '60s when people weren't eating all of the time. When eating at your desk was considered like horrible, just horrible. If you ate your computer or you ate your desk you were considered so wrong. Like you eat at a table, that's when you eat. If you tried to eat after school, hey, you don't get to eat because you're going to ruin your dinner. If you tried to have a snack at bedtime, your mom would say, "No, you should have eaten more at dinner time." You try to have a snack at 4:00 o'clock after school she said, "Too bad, you should have eaten more at lunch." And that was just kind of it.

Because we recognized that you have to balance this sort of feeding and fed state, and we have totally lost that. And now we're sort of paying the price of that. And we don't even know where we went wrong with the whole thing. We think it's all about the foods we ate, not recognizing, we think, "Oh, it's because we didn't discover quinoa?"

It's like they weren't eating quinoa in the '60s, and they didn't have any problems with obesity. They weren't even counting anything. It's like, "Oh, it's because they're counting calories." Nobody in the '50s counted calories. They were fine. The key is don't eat all the time.

Don't eat a lot of snacks. And that's sort of the main message we have to get to people.

Sam Asser: Amazing. And Dr. Pompa talks about like don't eat less, eat less often. So, it's exactly kind of like what you're saying, but I guess if somebody was looking at losing weight what do you suggest that they do in a day? Like how less do they need to eat and what do they need to eat? Because people get confused by this as well. Like, "If I'm going to start intermittent fasting then when do I eat and how much of that do, I eat?"

Dr. Jason Fung: Yeah, so there's lots of different things. You can talk about how often to eat and when to eat is a very important question before we get into sort of fasting schedules to lose weight.

First of all, you've got to cut out snacks. Snacks are deadly. The reasons the snacks are really deadly is because they tend to be very convenient. So, they're highly processed foods, they often have a lot of sugar in them. You've got to get rid of all the sort of sweetened beverages. I mean, they're everywhere. The Frappuccino's and stuff. So, it's a coffee drink, it's loaded with sugar. You've got to get rid of the added sugars, because again it's just advice your grandmother would have given you.

The drinks have to really be monitored because it's easy to get a Gatorade and think, "Oh, yeah, because I'm running today so I need Gatorade." It's really just a lot of sugar. So, you've got to get rid of that. You've got to get rid of all of the snacks because they're all like crackers and stuff. If you're having a snack of like grilled salmon and kale, it's like sure, that's not so bad, but who's doing that? You're grabbing a muffin or doughnut or something like that. So, the snacking really has to stop. That's

probably the most important thing.

Then you can talk about the when you should be eating sort of the circadian rhythm. And again, in my book I talk about the insulin hypothesis, so I go over this in the obesity code quite a bit. It's really insulin that drives weight gain. There are other hormones, for most people it's insulin. If you eat the same meal at breakfast versus dinner, you're going to get a lot more insulin affect at dinner time. So that means that the same meal is actually is more fattening at dinner then it is at breakfast.

So, eating late at night is just not a very good thing to do. And again, not much different than your grandmother would have told you, don't eat late at night. Because your body's shutting down, it's getting ready to go to bed so it's just going to turn all of that energy into fat rather into energy.

So, eating in the morning can be okay. So, eating breakfast, it's okay, the problem with breakfast food in general is that it tends to be very limited. That is most people are not eating sort of steak in the mornings, most people it's this sort of very limited selection. Most of which is very carbohydrate heavy. So, toast, and bread, and croissants, and so on. So, it's very limited, and a lot of people aren't hungry in the morning, so again, if you like breakfast and you can eat a breakfast that's real unrefined foods it's okay. But most people don't, everybody's in a hurry. In this case it's just skip it.

So, it's better to say just take a coffee than it is to eat a muffin and coffee. Just because you have to have breakfast. And this is sort of one of the nuances that gets lost in a lot of hysteria around, "Oh, you've got to eat breakfast." It's like, sure I get it, if you eat breakfast you stay more full for the rest of the day.

You're actually getting less insulin affect for the same meal. But if you're eating cereal, then you're better off not eating. If you're eating eggs and bacon, you may be better off taking that breakfast. It depends on the person.

So, the problem is everybody's in a hurry in the morning. And there's generally a very limited selection of food in the morning, so that's why I'm not a big stickler on breakfast. But if you eat a big breakfast, it's okay.

So, if you take away that, and then you say, "Well, you really want to concentrate your meal in sort of the middle of the day." Sort of like 12:00 to 3:00, sort of time period. Because there's a balance there of not being too late at night, and not in this sort of range where you're in a hurry to get to work sort of thing, so therefore I'm just going to grab a muffin. So that's probably the best time of the day is to concentrate your eating.

And then in terms of schedules, fasting schedules, so remember in the '50s you're just talking about a balance of being in a fed state and the fast state, so you want to be sort of ten hours or sort of three meals a day, no snacks. And then that's a 12 to 14 hour fast every day. That's pretty weight neutral.

So, if you're trying to lose weight you might not do very well on that. So, you need to extend it. So, you extend the fasting period to say 16 hours. So again, you try to keep your eating to eight hours, and then try and keep it to like the middle of the day. So, like 10:00 to 6:00 or something like that. So, the eight hours. You don't want to be like 1:00 p.m. to 9:00 p.m. because then you're going to get more problems.

The problem with eating late at night too is that hunger tends to peak around 8:00 p.m. So, you're

getting this sort of double whammy, you're more hungry, so you're going to eat more and you're getting more insulin affect for the food that you do eat. So, you want to concentrate those sort of eight hours in the middle of the day as much as can.

And then you can go further. You can go to 20 hours, you can go to one meal a day, which is about 23 hours. And then you can keep extending. So, sort of the most popular regimens would be sort of like a 16/8 sort of regimen. And that would be done about six days of week sort of thing. Twenty hours is popular. And then one meal a day is sort of like a 23-hour regimen. And again, keeping that meal say either to a big breakfast, then breakfast to breakfast or lunch to lunch is optimal. But in the typical working schedule it doesn't work a lot. Having a big lunch and then going to until the next day's lunch.

It doesn't work for me for example, so I rarely if ever do that. Because it's weird for my work schedule. My work and family life schedule. So, we typically have dinner as a family, so therefore I wind up going to dinner recognizing that it's probably not the optimal schedule. So that's a 24 hour fast. And that's usually done maybe three times a week or less. You can do it more if you like.

And then after that you start to get into the multiple days. We tend to avoid the two-day fast because if you look at multiple-day fasting, day two tends to be the hardest, and then after that it gets easier. Hunger starts to fall, and this is your body starts to shift over to burning your body fat, which takes 36 to 48 hours.

The longer you go in that, the more comfortable your body is. Your body switches over to burning fat, and says, "Hey, there's lots of this stuff. Let's just burn it." And then your hunger settles, and your

metabolic rate goes up and so on because you're not restricting your fuels, you're simply switching your fuels from the food that you ate to the food that you stored.

So, two-day fasts are not great because you're kind of hitting the worst time and then stopping. So, if you're go long, we usually tell people to go four, five, six, seven days, because you're getting the benefits all through. But you're getting those easier days at the end as opposed to the two-day fasts.

Now everybody's different, some people by day four it's really tough so therefore we say go short. You can do well on any of the schedules and you don't even need to fast. Obviously, there's lots of ways to lose weight and fasting is not always part of it. But it's an important thing to think about because if you're eating ten times a day and doing whatever diet that you're doing, you're going to sabotage those efforts by doing the ten times a day. So at least stick to sort of three times a day as sort of the maximum you really ever want to eat.

Sam Asser: Interesting. Interesting. So, I have two questions that have come up, and the first one is if it takes 36 plus hours to get into fat burning mode then what about the people that are doing the 16/8 method for instance? Are they still getting into a fat burning state, is that still going to benefit them for losing weight? Or do they need to do a longer one?

Dr. Jason Fung: Yeah. You can still do very well with 16 and 24 hours, because the key is really the insulin. If the insulin falls then you're going to start to burn your stored food energy. Now if you eat a very high carbohydrate meal then you're going to have a lot of glycogen around if you don't, you're not.

So, if your insulin is low and it starts to fall then you're going to naturally liberate, you're going to burn some glycogen but it's going to make it easier for the body to access those fat stores. If you have sort of high insulin for a long time you can develop this thing called insulin resistance. And that can also keep your insulin levels high and that makes it more difficult for those who have had longstanding obesity to lose weight. In which case you have to use some of these more intensive sort of strategies.

But yeah, it's not necessary to fast. You can lose weight without fasting. It's about controlling that insulin. So, by keeping it low, remember even four hours after your meal when you finished sort of digestion, your insulin is already going to start falling. And if your insulin resistance is low and you can start to liberate those stores of fat, because that's the signal to go into the sort of fasted mode. Even by sort of by three/four hours.

It's just that if you have a lot of insulin resistance it may not get into that so much. Yeah, I mean it's a different way to think about weight loss and weight gain for sure. But I think it's a much more physiologic method of doing it. Counting calories is ridiculously stupid because, you really have, it doesn't take into account sort of the body's actual response.

Like you restrict calories, you could eat all artificial foods, sweeteners and all of that and get zero calories. It's like, does anybody lose weight drinking diet Coke? Not really. I mean, if artificial sweeteners and cutting calories by putting all of these artificial foods in where it was important, then we would have an obesity crisis. We'd just drink diet Coke and we'd all be slim. It doesn't make sense.

It really requires kind of thinking about weight loss in a different way, a more successful way than the calories. And that's what we try to do in our membership. So, we have a lot of free resources for people. So, on our website, which is idmprogram.com which stands for Intensive Dietary Management. It's the program that we use for our patients. You can go there and there's a weekly blog, and I talk a lot about the science of it. And there's a lot of videos and lectures and stuff as well.

And then if people want a bit more guidance, they can do the sort of monthly membership, which is sort of group fast, doing fasts in a group is very useful because people are there to support you. People don't always recognize this, but sort of having support of peers is super important when you're trying to change behavior. And it's very difficult to do stuff out there on your own. So that's why we try and provide it. So, we try and answer questions and that sort of thing. And then if you want sort of more individualized help, then you can get that too.

Sam Asser: Amazing. Amazing. And thank you for sharing that because you do have some phenomenal information there for people that want to go deeper, and want to go further, and want to know more on this. Definitely check that out because you guys have such incredible information.

Now a couple of last questions just before we wrap things up today. What do you feel like is something that people don't know about fasting that you believe they should know? Like if you have like one paragraph, or one-liner, or just one message that you wish everyone knew about fasting, what would it be?

Dr. Jason Fung: It would that it's okay to not eat, and this is the message that I shouldn't even have to say. But I do. As a physician I tell people to fast all of the time. So, if you need to do surgery you have to fast. If you need to do a colonoscopy you have to fast. If you have to do fasting bloodwork, you have to fast. So, physicians tell patients to fast all of the time. So, we know that nothing bad happens, it's just a part of everyday life. Your body is okay, it's going to know what to do when you don't eat. You do not have to keep stuffing crackers into your mouth every two hours in order to be optimally healthy.

Our bodies have figured that out a long time ago. So, if you don't eat, you're going to lose weight. And guess what, it's not going to be unhealthy for you, it's okay. In fact, if you never fast, if you're eating all of the time it may have significant, significant health benefits. The weight loss, the Type II Diabetes, and then the autophagy. So, it's okay not to eat sometimes.

Sam Asser: We're not going to die.

Dr. Jason Fung: Exactly.

Sam Asser: I like it. I like it. And then the other question I have is besides what we've spoken about already, so like besides the insulin levels, and stopping snacking, and stopping eating so much what would be your number one advice aside from that for someone who's wanting to lose weight?

Dr. Jason Fung: I think for weight loss it comes down to two questions, really. It comes down what to eat and when to eat. So, we talk about the first question, sort of what you should be eating and what you should not be eating all of the time.

And it comes down insulin in the end, so what to eat you should eat foods that don't stimulate a lot of insulin because if you do, you're telling your body to store fat. That's what insulin does, that's what its supposed to do and that's what it does. So, you eat a lot of sort of white bread, which most people agree is not a great sort of slimming food, but if you eat a lot then insulin is going to go really high and it's going to tell you body to gain weight.

But the other question that people don't always think about is the sort of when to eat question, and people think it doesn't matter. You could eat from sun up to sun down is the same as long as the same number of calories. I don't think that's true. I think that the number of times you eat is actually as important or even more important than the foods that you are eating.

So again, it comes down to insulin, if you're eating all of the time, you're stimulating insulin all of the time and it's going to give you insulin resistance. If you don't eat all of the time you're not stimulating your insulin all of the time, you're going to let your body go into the sort of fasted mode, it's going to be able to digest the food and prevent the development of this sort of insulin resistance which is very important sort of in the long-term.

So, to me it's all about one, if you think about it from a physiologic end, it's all about insulin. But from a practical standpoint it's really about what to eat, and we recommend sort of unprocessed whole foods, low in refined carbohydrates, sort of moderate in protein, and high in natural fats.

And then the when to eat is don't eat all of the time. But what specific sort of fasting regimen you want to do, and remember fasting is a part of every day life. It's really just the

balance of the feeding, so if you're balancing your feeding, then you're fasting. If you want to lose weight you want to do more fasting. But what specific regimen you do is sort of up to you. You could 16 hours, you could do 18 hours, you could do 24 hours, you could do five days. They all work, but it's just a matter of keeping that balance.

Sam Asser: Awesome. I love it. And then the last question to follow on from that is once someone's lost the weight how do they maintain it?

Dr. Jason Fung: Again, it's just applying the same principles. So, which is eat healthy foods and don't eat all of the time. You can change things up. I don't think that our bodies are actually supposed to be in this sort of, "Oh, you should eat exactly 2,000 calories, and have it the same every single day for your whole life." I don't think you do well that actually. Our bodies are not actually meant to deal with sort of the same thing every single day.

So, I think that you need to change things up sometimes which is sort of how life is supposed to go anyway. It's sort of this, there are times that you should eat, and there's times that you should fast. So even if you look at sort of how our lives arranged. There's the holiday period where you know you're going to eat a lot, then there's sort of the post-holiday period where you have to balance that out. And that's just the way it is.

A lot of religions are built along the same things, so you have sort of Christmas where you're going to eat a lot. And then Easter and Good Friday where you're not going to eat a lot. So, there's these sort of built-in feast and fast, that's the sort of natural cycle of things. On a daily basis it's a natural cycle, but on a yearly basis it's also a natural cycle. There are going to be times that you're going to eat a lot, there

are going to be times that you really shouldn't be eating a lot to balance those times that you eat a lot.

You can't eat the same thing for a month of Christmas sort of thing, eat a lot, and then go back to regular. It's like you never made up for that month that you ate too much. So, for a month you have to eat a lot less, that's just balance. But everybody thinks, "Oh, I'll eat normal. I'll eat a lot for Christmas, and New Year's, and then I'll go back to normal and my weight will go back to normal."

It's like what about that whole, all of that cake and stuff that you ate, when did you make up for it? You didn't. You put it in, but you never put the effort into taking it out. So, it's really just cycle that's - I call it the cycle of life. It's a feast/famine cycle. It's like you fed and you fast, it's the same cycle, it's the yin and the yang. It's a balance that's there that we've lost. We say, you eat all of the time and forget the cycle. Oh, and if you eat a lot then just go back to normal. And it's like you didn't complete the cycle.

Sam Asser: Amazing. That's actually a really good way to put it, and I think it would have sunk in for a lot of people just then. So that's perfect. I thank you for sharing where they can go to find you. We'll link that up as well so everyone's got it, so they can go and find out more about your program. And have access to your videos, but are there any last words that you want to share with everyone today?

Dr. Jason Fung: I think that the only thing is to sort of make sure you figure out what works for you. Because what works for one person is not always what works for another person. So, you always have to sort of experiment, just because your friend did well on a low carb diet doesn't mean you'll automatically do well on it.

So, don't just sort of keep doing it if it's not working. The most important is really to find out what is working for you and what is not working for you. The advantage of fasting for example is that it works for almost everybody. People don't like it necessarily, but it almost always works. Because if you don't eat you will lose weight.

Some people have a terrible time on it, and some people have a great time on it. So, you have to find out where it works and this is where having options is such a great thing. And that is one of things we always talk about in our program, is look at the options. You could do this or you could do that and if you do great on method A, then do it. But next person's going to do terribly on method A, and we'll say then try method B or C, or D, or E.

And then do what it is that works for you without worry about, oh, but method A worked so great on my friend. It's like who cares? Who cares about that? I'm a clinician I deal with results, I don't deal with theories and stuff. Like there are theories, there are things that I think that will work better than others, but in the end the only thing that matters is if you're losing weight.

So, don't be afraid of what this person says you have to do, or this person says you have to do. It might or might not be right with you, and that's where we get into a lot of trouble. Is that a lot of sort of dietary people say, "Oh, it works so great for me, it must work for everybody." That's not the way it works. It worked great for you, that's it, that's all you can say, you can't say it'll work great for the next guy. It might, but it may not.

Sam Asser: Yeah. Absolutely amazing advice. And thank you so much for everything that you've shared today. It's been very

valuable for a lot of people, I know that, and a lot of little things would have sunk in because they did for me. So, thank you so much for sharing. And thanks for being here on The Fasting Summit.

Dr. Jason Fung: Okay. Thank you.



Intermittent Fasting and Cyclic Feeding

Sam and Mitch Asser with Daniel Pompa, PScD

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Narrator: Hey, friends. Welcome back to the Fasting Summit. Here we go again with another incredible session. I absolutely love this session. Let me introduce you straight away to Dr. Dan Pompa. So, he's internationally known for his expertise in weight loss, neurotoxic illness, nutrition, and investigating incurable illness.

He's a sought-after doctor and educator for neurotoxic-mediated illness, such as autism, chronic fatigue syndrome, weight loss resistance, diabetes, thyroid conditions, and fibromyalgia. His work is transforming lives all around the world. His detoxification and diet protocols have brought healing to the incurable and have been replicated by other physicians and teachers.

So, he's the doctor's doctor, essentially. And I really love Dr. Dan Pompa and some of the things that he has to say because he's spot-on and he definitely looks at the research, but he also looks at what's going on in his own mind and his own observations. And he's not scared to try them himself. So, he's someone who's living what he's teaching. He's ripped at 50-something years old, which the truth stands still to what he is teaching, right?

So, today, we're going to be talking about a topic that I've become

incredibly fascinated about because, during my time as a personal trainer, I used to observe a lot of people get the same results for, let's say, a 12-week challenge, which you see out there all the time, but if they keep doing that same challenge over and over again, the results stop.

And there's a reason why, and I believe that reason is cyclic feeding. And we need to be changing it up over and over again because it's the adaption that allows us to make that change. So, today's topic, which I really wanted to get here on the summit with you is all about intermittent fasting and cyclic feeding.

Now, this is one of my favorites of the Fasting Summit, so I know you're going to enjoy it. And this is for you, if you've struggled with weight resistance before, if you have any of those conditions that I mentioned there in the beginning, or if you just want to learn about how you can actually get in better shape and maybe a bit stronger. I'm excited for this one. Let's get to it. Dr. Dan Pompa and Sam will talk about intermittent fasting and cyclic feeding. Enjoy.

Sam: And it's Dr. Daniel Pompa time. Welcome, Dr. Pompa. Thanks for joining me on the Fasting Summit.

Dr. Dan Pompa: Yeah, glad to be here. This is one of my favorite subjects, I have to admit.

Sam: Awesome. Well, let's drive straight in because I know we don't have a lot of time today but a lot to talk about. So, we're excited to talk to you about something that you explained extremely well, and that's around intermittent fasting and cyclic feeding. And so, what would you say is the most important thing, if you can, around that and helping people to understand it a bit clearer?

Dr. Dan Pompa: Yeah. A lot of your viewers probably come from so many different mindsets on fasting, right? But I guess, you know, just from the start, our bodies genetically are designed to fast. So, fasting is something that we need to do. Fasting is something that creates adaptation. And something that I always teach on is, all the body ever wants to do is adapt and survive. Or survive and adapt. So, fasting puts the body in this adaptation of survival, and amazing things happen, like hormone optimization.

And today, we have so many different hormone challenges. I mean, from weight loss resistance, to people that just have lack of energy, brain fog, just don't feel well, don't know why, can't sleep, anxiety, I mean, I can just keep going down the symptom list. But fasting, feast-famine cycles, all of this that we're going to talk about today really is hormone optimization. It forces hormone optimization, and it is an answer to, I believe, an epidemic of those

symptoms I mentioned.

Sam: Yeah, absolutely. And I think that what I've found interesting, and something that you've filmed, was when you said that you're not going to just be lifting the same weights in the gym for the rest of your life. And I think people have this mentality of you have to stick with something, because that's going to get the result, whether that's being vegan or vegetarian or fasting or whatever it is, right?

But I really like the power in adapting and actually being able to change and have that variation. Yeah, do you mind speaking on that a little bit? Because I think that's so interesting for people that need to be strict on themselves.

Dr. Dan Pompa: Yeah, absolutely. So, you know, when you look at variation, variation forces the body to adapt, right? I think you gave a great example in the gym. So, if you go in the gym and do the same exercises that you started with, it gets less and less effective as time goes on. So, for example, you go and the first time you did that set of exercise, you thought, "Oh, I'm sore. Great results." And then it just starts to taper off.

Well, I think one of the things we see with diet, there's a lot of people arguing what diet is best. You have the paleo group, you have the vegan group, you have the vegetarians, right? The ketosis group now, it's the new group. So, the problem is, is maybe, just maybe, they're all right. Okay? Meaning that when you speak to a vegetarian, they say, "Well, when I went on a vegetarian diet, I had all of these amazing results." Kind of like exercise.

Talk to the paleo people, well, this happened, that happened. However, both of those, the paleo people all of a sudden

elevated protein can start to cause problems. They're not getting the same reaction and even can cause disease. The vegetarian can start lacking methylation, certain fats, and all of a sudden, it's not working the same. However, they've been locked into that diet because it gave them success, similar to the workout. So, diet variation is something that I coin. And really, it's the change of the diet.

You see all these amazing things happen when you actually change your diet and say, "Oh, this is working great." It's the change that forces the adaption and forces the hormone optimization. So, we see, when we change diets, I don't care what change it is, you see a rise in growth hormone, the cells become more hormone sensitive. So, that's part of what I teach as far as diet variation goes.

So, it's really fun, because I'm invited to speak at all of the low-carb summits, and all the big low-carb events, and I'm always saying, "Being low carb long-term can actually create different issues." Right? Like the inability to all of a sudden lose weight, no matter how low your carbs go.

And not only are you not losing weight, you actually start gaining a little belly fat or hip fat, all of those areas that you really don't want to gain weight in, and you're losing muscle. And you're wondering what's going on, even though your carbs are going lower and lower. Well, the body is saying, "Hey, all I want to do is survive. And because I'm so low-carb and your fat is the only fuel we have, I'm going to stop burning it, because I'm that darned smart." And so, it not only stops burning it, it'll block insulin receptors and actually start to store it, even despite the fact that you're eating no carbohydrates.

So, there's other reasons, too. As insulin goes too low on certain diets, then all of a sudden, you're not transitioning or converting T4 hormone, thyroid hormone, to T3. So, varying the diet can actually help that conversion. So, there's multiple ways that we vary the diet.

Sam: And so, can we speak about a little bit of those variations in how often you would need to change it up?

Dr. Dan Pompa: Yeah. So, look. There's seasonal variation. There is weekly and monthly variation. Okay. So, let's talk about seasonal and start at the top. When we look at the Hunza people, for example, the Hunza people, they would go in their winters and they would eat a very high-fat diet. I mean, buttermilks, all of the saturated fats, the meat, the lard, etc.

And then they would come into their spring so sick of fat, but they also couldn't harvest. There wasn't plenty of food yet, and they would fast. Not because they wanted to, because they were forced to. It became known as starvation spring, which even the American Indians went through. And then, of course, summer came, they looked like vegetarians.

As a matter of fact, the British, who had spent time with the Hunza people, they thought they were vegetarians and that was the reason they lived so long. But they didn't stay with them in the winter when they realized they were in full-blown ketosis.

The American Indians, which I've spent a lot of time studying as well, same thing. In the wintertime, they were full-blown ketosis. You know, "paleo" if you will. And then of course, by summertime, the diet completely changed. So, that change, I don't care where you are, even the Eskimos, who we

thought they were always in ketosis, they actually really weren't. The moment they had chances to get out of the lard and meat, they sure would.

So, moving seasonally in and out of diets, for other reasons, even the sun. Because we know that when you're in the sun more, you can actually tolerate higher carbohydrates versus in the winter, when you don't. So, seasonally, lack of food, environmental pressures, all of these things can actually create forced seasonal diet variation.

I found an article that I showed at my last event, and it basically said that the lack of diurnal eating, meaning we're forced to change our diet seasonally, could be a reason why we're seeing explosions of certain diseases like cancer. So, in the article, they're saying that because we are stuck in a feast mode as a society, and most of us stuck on the same diet, it's actually leading to the lack of adaptation, this very thing that I'm talking about, these changes that occur and therefore, it's leading to diseases.

Here's another way to think about this. Your microbiome, which we know makes up your gut bacteria and all this amazing bacteria, we know now today it's responsible for our immune system, even how our brain works and all these amazing things. We know that shifts when we're forced to adapt, even hot-cold or cold-hot, we can take mice or animals, force them into these changes dietarily or even temperature changes, and we see these hormone shifts occur.

And a study that I shared at my seminar said a lot of the change they're noticing happens in the microbiome. So, when the microbiome changes, now all these health things change for the better.

So, we know that going into these times of ketosis, ketones rise, and it changes our DNA, changes our microbiome. The bottom line is this: the change is where the magic is. It forces adaptation. All these great hormone things happen. Cultures used to be forced to do it. We're not. We're stuck on one diet. It's not a good thing.

Sam: Yeah, absolutely. And that's so interesting, because you know when you think about in the winter months, you like hold on to a layer of fat, as they say, or you go into summer and you need to shed off that winter fat that you've gained. Do you think that there's a way in which people can actually get maximum results, no matter what season they're in? And how do they figure out what that is?

Dr. Dan Pompa: Well, I mean, in the summer, I'm transitioned right now into a higher carbohydrate diet. Now, when I say "high", by American standards, trust me, it's still not high. I'm probably at 100-150 grams of carbohydrates. Now, I made that shift. I no doubt gained more muscle, and I didn't lose any leanness at all. Why? Because my hormones shifted. So, even though I'm eating more carbohydrates, the opposite is true. Even with our clients and patients, when we change the diet, we can get them to start losing weight again.

Now, I don't need to lose weight, but I noticed a change in how much muscle I hold. Now, in the wintertime, when I shift into ketosis, I become very lean, actually. So, because again, the shift occurs, and now I'm consuming under 50 grams of carbohydrates. My body goes into this major fat-burning thing, and again, I notice new things. I notice that my memory is ridiculously sharp because of the elevated ketones.

Every time you go into a ketonic state, bad genes get turned off. It's called epigenetics. Again, you change your microbiome, which changes your immune system. So, those changes... Look, I'm 52. I have abdominals just like my 20-year-old, who's just in the room, and he'll tell you that. So, how do I stay so lean at my age, even more lean than when I was in my 20s myself? It is this dietary shifting I do.

Now, keep in mind, I do this all still while intermittent fasting daily. So, maybe we can kind of transition into that. But hold on, I didn't finish that. There's still a loop to close here. Because I talked about seasonal variation. Now, let me talk about monthly and weekly, and then that'll bring us into the conversation of intermittent fasting daily, okay? Even how I block fast periodically. There's so much here, I know. I know. We're going to get you up to speed. Okay. So, that's one way we vary the diet seasonally.

Another way is monthly. Okay. So, I had a client the other day. Okay. So, hypothyroid people tend not to do very good in too low of carbohydrates too long. However, they benefit from short bursts of it. So, this is an example of variation on a monthly basis. We will typically take one week of the month, and if you're female, we do it the [week] of your period. And we go high carbohydrates. 100-150, even 200 carbs. Right? Healthy carbs.

Let's eat more sweet potatoes, yams, maybe wild rice, maybe sprouted things, maybe some more legumes, berries, things like that. Let's increase the healthy carbs for a week of the month. And I'll tell you, magic happens. Especially with the hormone-challenged person. Now, all of a sudden, they're making hormone conversations, the elevation of insulin for that period of time puts

you in a more anabolic state. And then we move back into a lower carbohydrate diet.

Now, here's another variation. I just did this with a client. So, we did one week of the month where we elevated carbohydrates. We took another week where I put them in what I call "partial fast", between 500-1000 calories, and we based that on the body weight of the person. So, if you're a smaller person, more like 500. If you're a larger person, more like 1000.

But anyway, so then we do a partial fast for one week. So we calorically restrict you for one week, but you don't ever want to calorically restrict long-term. It doesn't work. It lowers the metabolism. But for one week, it's magic. So, imagine four weeks in a month. You have one week where we do regular intermittent fasting, which we're going to talk about. You have another week where we partial fast, reduce your caloric intake down to like 500-800 calories, 1000 calories. Another week of just normal intermittent fasting. And then the next week, where we actually increase the carbohydrates. That's a feast week. Okay. That's monthly variation.

Now let me give you an example of weekly. I call it 5-1-1. So, we have five days of just regular, intermittent fasting, which we're going to explain. You have one day where you go dinner to dinner, where you simply don't eat. Nothing all day, and so dinner to dinner. You ate dinner last night, you're going dinner. So you fast at 23-24 hours, something like that.

Then you have another day, Saturday or Sunday, where you feast, where you increase your carbs. In that day maybe you even eat three meals a day. So, five days, we eat like intermittent fast, where you eat maybe one or two meals.

Another day where you go dinner to dinner, and another day you feast. So, that's weekly variation. All right, so the reason we do it is we're forcing adaptation. We're getting the body to change, elevate its growth hormone, get more hormone sensitive. The change is the key. So, there's all of the examples.

Sam: Yeah, I like it. And on the fast day, are you drinking water? Are you drinking coffee or herbal teas, or anything like that? Or is it...

Dr. Dan Pompa: Exactly. So, intermittent fasting, I believe humans are set up for this. So, I first saw this, actually, when years ago I went and visited a hunting-gathering tribe in Africa. And I saw they only ate one meal a day. Now, it was a two, three-hour meal, if you will.

The men went out early in the morning. They were never around. They went out hunting, the women out gathering. And there were some women left dealing with the kids. But they came back, maybe three or four in the afternoon with the catch, whatever it was, and then that's when the whole tribe ate. And then that was a big deal. They ate for that one, big meal a day.

And I was thinking, "Gosh, I never saw this." You know? So much for the five, six meals a day thing. These people are lean, strong, go all day. And I'm like, "Well, how do they go all day and chase down this prey?" Right? How do they do that? Well, they're fat adapted. They just burn fat efficiently that they can go all day, and then they come home to that one meal. That's intermittent

fasting. So, you can think about it in eating windows, where I eat typically in a four- to six-hour window.

So, my first meal, let's say, is at 2:00. My last meal is maybe 5:00 or 6:00. Okay? In my first meal, typically it's a small meal. I just don't have a lot of time, I'm busy in the day. Maybe it's like a little snack meal, and then my bigger meal typically is later in the day. It could be flipped. You could do the bigger meal here and the smaller meal there. There's arguments for both. But the point is that I'm fasting for at least 18 hours to 20 hours, you see? I'm not eating.

You asked if I drink coffee. Yes, you can. You can do some coffee, tea, warm beverage, kind of helps in the morning. You know, you like to wake up to that. Now, caution. If you drink coffee and your glucose rises after coffee, it's not a good thing for you.

So, here's my advice to see if you can drink coffee in your fasting time on a daily fast. Wake up, do your glucose in the morning and mark it down. So, let's say it's 80. Drink your coffee. 30 minutes later, check your glucose again. If it's 90 or 100, that coffee's not good for you. Try it with more fat. Try it with fats. If it raises again, try something else. You know, maybe you try it black, maybe you try tea.

So, the point is, you don't want to see a glucose rise. So, coffee is not always good for all of us, because maybe it's just stimulating your adrenals and a cortisol rise, the glucose rise is what we don't want, which technically breaks the fast. So, if your glucose stays the same on average or drops, do your coffee in the morning, no problem.

Sam: Yeah. Okay. That's good to know as well. Nice. All right, and so, you know how you were saying there's a monthly variation you can do, or a weekly? How do we know what's best for the person or for ourselves?

Dr. Dan Pompa: I think that you work up to these things too, sometimes. So, for those watching, saying, "Okay, I want to do this." All right, look. Start by just saying... Here's where we start. Believe it or not, the average American, you know where we start with this whole concept oftentimes?

Stop eating between meals. The average Americans, they're putting food in their mouth. Maybe it's the kombucha drink, the healthy whatever it is, the hand full of nuts. And they really eat five, seven times a day, but they'll tell you only eat three times today. Most people don't though. They're eating between meals. Stop it. That's step one.

Step two, maybe you eat dinner an hour earlier and breakfast an hour later. That brings you to a 15-hour fast. "Oh, I can do that." You're still going to eat three meals a day, you're just pushing them out.

Second step, or third, wherever we're at in the process, is drop the breakfast completely. Now do your first meal at noon or 1:00. All right, because now you're becoming more efficient, and now that becomes easier for you. And then the third step is, add a couple days a week where you do dinner to dinner. "Oh, okay, I can do that a couple days a week."

Now, add a feast day, where you say, "Okay, now I'm going to eat." Because believe it or not, people struggle. They don't want to add the feast day because they start getting results, and they think the feast day is going to throw them off. Quite the opposite. It reminds the body it's not starving. Simple as that.

That feast day, two days after a feast day, I am visibly much leaner. Because as long as you remind the body it's not starving, it'll continue to want to burn its fat. The moment

it thinks it's starving, for whatever reason, caloric restrictions, why it doesn't work, eventually it thinks it's starving, so it lowers its metabolism, lowers its metabolism. All of a sudden, you're eating 500 calories and going, "I'm getting fat. What's going on?" Right? The body thinks it's starving, and it will store that fat regardless of what you eat, or how much.

Here's the key. When we look at studies, cultures that live long, we know eating less is the key. There was a just a woman, Anna is her name, from Italy, right? 117, she just died a few weeks ago. It was in the newspapers, on the internet. And she said, basically, she ate one meal a day, right, and she said she ate small amounts. Even later in her life, the last whatever years, I think she said she ate two eggs and some cookies. That's basically what she was doing. We know eating less lives longer.

Now, I'm sure she was eating more when she was younger. She got down to where that was all she cared to eat. She wasn't hungry. But the point is, is we look at Okinawans, we look at the Tibetans, we look at the African tribes. They eat less at the end of the day; however, they don't do it by saying, "I'm done eating. I'm a glutton. I'm just going to eat half of plate." Like Weight Watchers and all. "I'm just going to eat a portion." No. They don't do that. They eat less by eating less often. So, that's my saying. Don't eat less; eat less often.

So that's why intermittent fasting is good. So at the end of the day, I do eat less. There's no doubt, because you're just not as hungry. I'm allowing my body to burn its fat for energy.

Now, athletes, here's even more magic, right? So, you want to optimize your hormones, workout in the fasting state. Then you get

even a higher growth hormone spike. So I can go out in a fasting state and do a two, three-hour bike ride because I'm so efficient at using my fat for energy. And then wait an hour or two, and then you can eat. But now I get that growth hormone rise that occurs.

Adaptation. I'm forcing my body to throw up its growth hormone to save its muscle and burn its fat. So, all of it's adaptation, but all of these things work. Don't eat less; eat less often. You'll live longer, and your body becomes more efficient at burning its fat for energy.

Sam: Amazing. And is there a difference between male and females, with intermittent fasting especially?

Dr. Dan Pompa: I think in the United States, we can see a difference. So you go to the tribes, and you would say, "Well, there's no difference." Right? Because they're healthy. But in the United States, we have so many females with hormone dysregulation, thyroid conditions. There is a difference.

So, that's why, again, variation is really critical. So, we need more variation with the hormone-deficient people. Because remember, you have to punch that high glucose insulin oftentimes to make thyroid conversions. So, yes, there is a difference that we see, especially with a sicker group of people. And women hormonally seem to struggle a little more.

And by the way, that's where that monthly variation came from. My wife and my son's girlfriend, they were talking about their cravings during their period, and how they struggle to stay low-carb. And I said, "Well, listen to your body." And as I said the words, I said, "Oh my gosh. Of course. Why do women crave chocolate during their period? Why do they..." It's the body knowing

it needs to make more hormone conversions and needs some higher insulin, right?

So, of course, I tried it with them. I tried it with other clients, my doctors tried it with other clients' patients. Boom. It worked. Especially for these hormone-challenged females. The one week of high carbs during the period, man, it was a game-changer. All of a sudden, the women who their hair was falling out, the low-carb worked for some things, but they were losing hair, their thyroid. Boom. It was transformative for them.

Sam: It's a game-changer in all aspects, right?

Dr. Dan Pompa: It is. I mean, it's so complicated. When you understand, look, low insulin... I mean, I can argue that insulin is a killer. Chronically-elevated insulin, disaster. It creates inflammation and all these problems. We know that. It no doubt ages you prematurely. However, bodybuilders put up their insulin and they're in an anabolic state. They recover faster.

So, insulin can be used as a tool, and our body uses it as a tool, you just have to emulate ancient cultures. So, insulin, someone who has chronically low insulin, low-carb diet for a long time. They got results, now they start gaining fat around their waist, they start losing muscle. I had this conversation with Joe McCullough, and I said, "Look, the low insulin, one of the things it does is insulin actually shuts off gluconeogenesis." What that means is your body can take its own muscle and actually can make glucose from it, right?

So, therefore, we don't want that to happen. But when insulin goes low, really low, chronically, now you don't have enough insulin to shut off gluconeogenesis. And now you

can start actually losing muscle. So, how do we beat that? One or two carb days a week, that's it. Boom. Elevate the insulin, now the body doesn't think it's starving, now we have a little bit of insulin to shut off gluconeogenesis. Every time Joe ate a little bit of carbs, even if it was like a bar, is all of a sudden, his glucose would drop. Well, how was that possible? Because it shut off gluconeogenesis.

So, anyway, it tells the body it's not starving, it can shut off gluconeogenesis. But again, if you elevate insulin all the time, you're going to get fat, you're going to store fat. But if you do it, just throw bursts at it, it's the opposite. Your body actually will burn fat. So, it's not always what you think, but the variation, therein lies in the magic.

Sam: The variation. And you know how you spoke about the one you can do within five, like the week? And you said one day was of feasting, of feeding and eating more. Is that typically your higher carb day as well?

Dr. Dan Pompa: Yeah. So, exactly. The feast is typically the high-carb day. Now, you have sick people who go, "I just can't eat carbs." They're so food-intolerant. Do protein. Do a high-protein day. That'll get the insulin up too. Or you just simply eat more calories. So, you can do this. You don't have to just do a high-carb day, it could be a high-protein, just a high-calorie, all of it still works in the variation. So, on my feast day, typically Saturday, I eat three meals that day.

And by the way, it's hard. I don't want to eat, but I make myself feast. And I definitely eat healthier carbs., even when I'm eating now, like I'm eating more carbs, I still have a feast day where I still eat more. I definitely eat more protein, and I eat probably slightly even more carbs. The other days, the five

days, I don't eat until... What time is it? 2:30. I haven't had a bite of food yet. I do okay with coffee, so I can have a coffee in the morning. But I haven't had bite of food yet. I probably won't until about 5:00 today.

So, I'll do five days where I eat let's just say two meals, maybe a snack between 2:00 and 3:00 and then a meal at dinnertime. And then, I'll do one, two days minimum of dinner to dinner. And those days just happen organically. I don't even plan them. And then Saturday is my feast day. So there's my weekly variation. Now, I typically throw in partial fasts, different times of months for a monthly variation. And of course, I already explained that I seasonally vary my diet as well.

Sam: And do you seasonally fast as well when changing up the seasonal diets?

Dr. Dan Pompa: My wife just talked... Usually, we fast, like I said, do a fast in the spring. I actually just did a partial fast, which by the way, there was just a study out in February 2017. What they did in this study is interesting. Partial fasts are powerful. Five days of a month, they put people at 500-1100 calories. Very similar to what we do. And the results were amazing. The other 25 days of the month, they let people go back and eat whatever they ate. So, I'm sure disastrous.

However, again, it was the variation. So, five days a month, they did this a few months in a row, but it was amazing because the pancreatic cells actually stimulated stem cells, and they actually regenerated pancreatic cells. That's the power of what I'm talking about here. So, that was a partial fast.

Now, we can do a whole water fast, which is just water for five to seven days. We could do a partial fast, 500-1000 calories. And when we do

that, we make the diet really simple. Almost raw, but you can have some steamed vegetables. But I typically just keep it very light. Berries, seeds, some nuts, as long as you're not intolerant, vegetables, and those types of foods.

But anyway, we do that for seven days in a month, and that emulates a lot of the same results you can get from a pure water fast. Now, I think there's still an argument for doing a pure water fast, but yeah, those variations are amazing.

Sam: Yeah. Awesome. Okay. And so, I guess this variation diet that we've spoken about and being able to adjust and change things up. Who is it best for? Who should be doing this if they're listening?

Dr. Dan Pompa: People with weight loss resistance. People that have hormone dysregulation. People that have cancer. I interviewed several times Thomas Seyfried. I've been in some group things with Thomas. He talks about how they fast people. They move them in and out of ketosis, which we haven't even really spoken about, but using keto diets.

Now, Seyfried will tell you, and he wrote the book by the way, Cancer as a Metabolic Disease. So, they're basically putting people into ketosis, where your cells can only use two things for energy: sugar or fat. So, ketosis forces the cell to use just fat for energy, and it's a majority fuel.

What Seyfried says, now again, cancer cells, just to bring this full circle, cancer cells can only use sugar. They can't use fat. So, you can imagine the benefit it gives the immune system when you force cells only to use fat. The cancer cells can't make that adaptation.

Now, metastatic, there are certain cells that can, but generally, non-metastatic diseases, they can't

make that conversion. But Seyfried will tell you, unless you get enough restriction to bring the glucose very low, it really doesn't work to starve those cancer cells down. So he uses fasts, but he uses a process called push-pulse, he talks about, where varying the diet, moving in and out of those states. So, fasting states, ketosis, etc.

So, again, cancer would be another reason, according to Seyfried's work I should say. I said weight loss resistance. I said hormones, thyroid I brought up earlier. Diabetes. So, Fung. I interviewed Jason Fung. He wrote a book called "Complete Guide of Fasting." Great guy out of the University of Toronto.

Fasts, diabetics, and again, he uses this variation even within weekly. So, he'll take people and do 24-hour fasts, 42-hour fasts within the week. Again, the variation is the magic, even for diabetes. So, there's some conditions where I think it's absolute.

I think athletes... What we get from the hormone driving is hormone optimization, athletes are now learning that this variation, the natural bodybuilders are using intermittent fasting with feast days as a way to bio- hack the hormones, to actually build muscle. So, there you go.

Sam: Yeah, absolutely. So, anyone can really, depending on what they're wanting to achieve, can benefit from doing some sort of, whether its intermittent fasting or cyclic feeding?

Dr. Dan Pompa: Listen. The ancient tribes did it. They were forced to. I believe we have to go back and emulate these cultures. We are at feast state all of the time, which is working against us. There's several studies out there that show the pitfalls of eating five to six meals a day, and I know we've been taught

so long that that's what you want to do to maintain your metabolism. It works short-term, just like caloric restriction. Short-term.

But it doesn't work long-term, and that's what the studies show. Because you never, ever give your body a chance to burn its actual fat stores when you're eating all the time. You want to die earlier, you want to age faster, every time you eat, you spike insulin and glucose. I don't care if it's a salad. The more insulin and glucose spikes you have, the earlier you die. How do you avoid it? Don't eat less; eat less often.

When you look at my glucose and insulin throughout my day, it's like this. So, I literally lengthen my telomeres. Telomeres are the only biological clock that we have to determine how long you actually live. So, you can measure somebody's cellular age. Now, my actual age, I'm going to be 52 this year. My cellular age is more that of in my 20s. So, you know, that's the difference of what you can do.

Sam: How do we measure that?

Dr. Dan Pompa: It's called a telomere test. Actually, I'll tell you a funny story about that, because my wife, and my wife's in incredible shape too, and she'll be 50 this year. So, we got two tests back, right? So, I think one was like 39 maybe as the cellular age, and the other was like a teenager, okay. So, the names were mixed up.

So to this day, we don't know who technically was the teenager on the telomere test. She claims it's her. I claim it's me. Probably her. I was sick for many years before she got me into this work, so 2000, I was very sick for a period of my life, so it was probably her. But anyway, I'm going to re-run the telomere test, so technically, I don't know where my telomeres are exactly, but I know

they're not in the 50s.

Sam: 20s is still pretty good, so we'll give you that. Now, I have one last question and I've been asking everyone on the summit, and that is what is your biggest tip or advice that you can give someone when they're going through this change and seeking support from family and friends around them?

Dr. Dan Pompa: Don't tell anyone until you get the results. Here's the thing. The fact is, is your family and friends are going... Because this is 180 degrees opposite of everything the world teaches, right? So, and by the way, that's a principle I have. It's called the 180-degree solution. Meaning that, if you want to know what to do, watch the media, read the articles of all of the magazines, do 180 degrees the opposite, and somehow, you'll land on the truth every time. It's true.

I tell people, "You don't need my advice. Just watch the media and do the opposite. You'll get it." Right? Low-calorie, yep, doesn't work. Low-fat, nope, that doesn't work either. So, anyway, honestly though, people are going to shoot you down. Okay? So, wait until you get some results, then they're going to start asking, "What are you doing?" Right? Then they'll say, "You're getting too skinny." Right?

Listen. Nobody wants people to do things that make them feel more guilty, right? So they're going to chop you down. But you know what, who cares? Eventually, they're going to ask you, "What are you doing? I want to do it." It takes time, right? And then you can show them some studies, send them to my site and watch my videos, right? Educate them.

Sam: Yeah, absolutely. And where can we go, on that note, to find out what you're doing? And how can people follow what you're up to?

Dr. Dan Pompa: Yeah. I have thousands of articles and thousands of videos. I do a podcast called "Cellular Healing TV". But you can go to D-R, like doctor, drpompa.com. So, drpompa.com. I have every episode of Cellular Healing TV that I've done throughout many years, thousands of articles. Go there.

Sam: Yeah. Awesome. You have amazing videos up. We absolutely love watching all of the stuff that you produce, and it's been awesome having you to talk today. We could keep talking because there's so much we want to talk about, but I know you need to go and have a little snack. It's now nigh on 3:00. So, thank you so much for joining us, and we hope to speak again soon.

Dr. Dan Pompa: Absolutely. Thanks for having me.

Sam: Thanks again for joining us today on the Fasting Summit. I really hope you enjoyed today's session. Now, remember to grab the all-access pass now, where you can take away these interviews and speakings and have them with you for life, being able to rewatch and relearn as you go about your fasting journey.

So, grab your all-access pass now, because I can guarantee that you can look back and you'll learn something new that perhaps you weren't ready for today. So, grab your all-access pass and good luck with the rest of your journey.



Fasting for Health and Healing

Sam and Mitch Asser with Joel Fuhrman, MD

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Sam: Welcome Doctor Fuhrman. Thank you so much for joining me here on The Fasting Summit today.

Dr. Fuhrman: My pleasure. Great to be here.

Sam: Awesome to have you. I know you have a lot to share. We've got a limited amount of time. So I definitely wanted to start straight in. Today we're going to be talking about fasting for health and healing. I know that's a broad topic and I've done that on purpose because I know you have a lot to say. But first, where do you feel like fasting started for you in the health realm?

Dr. Fuhrman: Well, I've been in medical practice for more than 25 years and I've utilized fasting as a therapeutic modality to aid in people recovering from serious diseases. So obviously I'm not discussing fasting in an isolated form, it's fasting in conjunction with excellent nutrition.

And I always teach people that if you don't frame the fast both before and after with a proper way of eating, there's no point in fasting at all because anything you do temporarily it's not going to result to sustained health benefits. So fasting can be utilized in a few ways. Number one, it can be utilized intermittently to establish an extenuate lifespan that encourage

or excites more of the self-repair mechanism of the body.

So giving the body a complete rest from digestion, is useful to extending human life, but that has to be put in a framework of having optimal nutrition and not being deficient in any nutrients at all when you're regularly eating and not eating things that are toxic.

So in other words you can't eat, we call it the standard American diet in America. I called the DAD, the Deadly American Diet because it's 55% of calories from processed foods and 33% from animal products. The American diet is predominantly low nutrient processed foods that are high glycemic. And in addition to a high amount of animal products, the amount of produce, fruits and vegetables, beans, nuts and seeds onions, mushrooms, berries, the natural plants, are not a sufficient part of those obviously, the vast majority of what people eat. You're taking a lot of phytochemicals and antioxidants.

So if you do that, the question is, why do you need fasting for? Why don't you just eat healthy? And certainly I am saying that eating healthy consistently for the major portion of your life, is the most critical and important thing to assure freedom from heart attack, from strokes, from cancers and from dementia, from the major life shortening diseases that afflict the modern world.

Fasting can be utilized intermittently into a healthy eating program to have the capacity to further push the envelope of human longevity, to extend life longer. And there are certain conditions that people develop, that fasting can be used therapeutically to help induce remission, to help people make a full recovery. A good example might be asthma. Like I'm having a patient who's eating healthy because they've had allergies and asthma for much of their life. They've using inhalers, they have to go on medications episodically, and you can't just stop their medications because they won't be able to breathe.

So after eating healthy for a year or so and cutting back the medications to the minimum possibly, then we could institute a fast. And the fast has such an effective anti-inflammatory effect, that enables us to be able to safely remove the medications and have them breath comfortably.

And then if they continue to fast off medications, the body can go through some deeper detoxification that the suppressive effect of the steroid inhalers were preventing their body from accomplishing. So they start to develop say a healing crisis where suddenly they're coughing up some crud out of their lungs or they're starting to do repair that they couldn't get done when they were in the feeding state. And that subsequently led us to the point where they were able

to make a full recovery from the asthma and not need inhalers anymore. So there, the fast was used therapeutically. There are other cases where we use fasting therapeutically with people with inflammatory bowel disease like ulcerative colitis. And I've had many patients over the last 25 years where some people were so severe with ulcerative colitis they were told they were going to lose their colons and have a surgeon come in and take their colon out.

Some of these people I had put on very careful eating regimens. They've been on long fasts of resting their bowel and then they maybe ate only a zucchini diet for a week after the fast and gradually got to eating some cooked vegetables and brought them back to eating food again. Under proper medical supervision, a physician can use fasting as a therapeutic tool to aid in certain medical positions where fasting would be appropriate.

Of course we have to mention that sometimes fasting is not appropriate. And I personally think the biggest contraindication of fasting is somebody who hasn't proven they can stick to a healthy diet. I want them to prove to me first, they can eat healthily and they're going to eat healthily before I throw them on a fast because fasting slows you metabolically rate and makes the unhealthy diet more awakening causing and more unhealthy and the fasting makes your body vulnerable. In other words it gives you both opportunities. It strips the body off nutrients, it increases digestive capacity. You absorb and you assimilate a greater proportion of what you're eating, which means you'll have an opportunity after the fast to replenish the body with high quality food and to build back cleaner and healthier tissue.

But you also could blow that opportunity by absorbing and building back nutrition with unhealthy food and the toxic food and put weight back too rapidly that can defeat the benefit of the fast because you gain weight too rapidly and the fat you regain could be saturated and more visceral. Visceral fat is fat around the organs, not fat external to the abdominal wall and that's the most dangerous type of fat.

So when people gain their weight back after the fast it has to be slow. They have to do it with exercise put back mostly muscle and they have to eat a superbly healthy diet when they complete the fast. We're just saying we don't fast people with kidney failure. We don't fast people with some significant issues like that. I guess mostly kidney and liver problems are the major issues we don't fast people with.

But I also would want people to emotionally and intellectually be knowledgeable and going to be adaptable and stay changed on a healthy diet subsequently after the fast. People have this diet mentality where they go and off diets especially to heal their weight] and we don't want people to do that.

Sam: With like the kidney one, would you put them on the healthy eating thing fast and then potentially bring in a fast or something like that just wouldn't be the case?

Dr. Fuhman: It depends if they have significant kidney disease. Kidney disease is not always reversible and if it is reversible, to a small degree. If the person has significant kidney insufficiency, they may not be a candidate for fasting. Unless their kidney improves before we consider that. For example, I really have one case where a young girl had severe lupus and she had a high creatinine of 4.4 and she was

in line to have a kidney transplant because her lupus was so bad.

And this girl made a complete recovery. Her kidney came back to normal which shocked me. I never thought the kidney could go that bad and then come back to normal again, but we did it mostly with diet and we did exclusively with diet and some supplements. But she made a complete recovery by changing the way she ate.

But I'm saying that we could have incorporated some fasting once her kidney came back to normal, but we wouldn't even thought about doing that with such a high creatinine. But also, there is some people with digestive impairments and chronic inflammatory bowel disease or Crohn's disease who do better regularly when they fast two or three days a month.

Their weight stays stable, they're not chronically losing weight each month because they're fasting around the same amount of days each month. The little weight they use they gain back before they fast again. They lose a little bit they gain back before they fast again. Their weight is relatively stable but they fast two to four days a month as part of their nutritional regiment to keep their Crohn's disease or colitis in check.

Sam: If there was people listening right now who potentially haven't yet done a fast or had some things that they want to heal with the fast, what do you suggest is the healthy eating plan that they do before they enter into that?

Dr. Fuhman: I've written numerous books. I've actually written nine books including one book called Fasting and Eating for Health which is the book all about fasting but it talks about eating as well. That was written about 20 years ago. And then I have my more

recent books like The End of Heart Disease, The End of Diabetes and The end of Dieting. And The End of Dieting I think is an important book for people who are considering fasting to read because it goes into the unfavorable effects of letting your weight yoyo up and down. I encourage people how it's unhealthy to have your weight yoyo up and down.

And so it's unhealthy for people to go on and off crazy diet schemes to lose weight. And we shouldn't be utilizing fasting as a crazy diet scheme to lose weight. It's not for weight loss. We don't want people to lose weight and gain it back quickly. We want people to lose weight and keep at that favorable lower weight for the rest of their life.

That means you want to change the way you eat and those changes in the way you eat should be made permanently for the rest of your life. And we're talking here about a diet that's rich in produce and because there are three things that I teach people about diet that's critically important and I think that these three things are not controversial. I think that 90% of the nutritional scientists worldwide would agree with these three things and that's one, is that eating processed, refined or high glycemic carbohydrates, don't just cause obesity and diabetes and heart disease, they also cause dementia, strokes and they predispose you to higher risks of cancer.

So we're talking here about white flour, and sugar products, commercial baked goods, white rice. And we're also talking about honey and maple syrup and a guava nectar and all these high glycemic sweeteners. We shouldn't be putting sweeteners in our foods except of fruit. We should be eating foods that we shouldn't be highly sweetening. So that's the first thing. And I want people to not eat

white bread and not eat bagels and cookies and crackers and all kinds of these stuff.

And if you're eating whole grain bread, it should be a small part of your diet. It shouldn't be a major part of your diet. You shouldn't have a grain based diet, you should have a vegetable based diet. The second principle has to do with animal products. That we know as animal products work in a person's diet, the risk of mortality from heart attack and strokes increases, but especially cancers because animal protein raises a hormone called IGF-1. IGF01 is a growth promoting hormone. It promotes cellular replication, growth of unhealthy tissues and growth of tumors.

But the reason why fasting extends the human lifespan, is because it lowers IGF-1 so radically and it keeps IGF-1 lower for prolonged periods of time. Not only are high levels of IGF-1 dangerous, but lower levels of IGF-1 slow the aging process and increase cellular repair mechanisms and the ability of the cell to rid itself of toxins with lower levels of IGF-1.

That does not mean that you can't have a little bit of IGF-1 that's too low. Over the age of 80 years old having an IGF-1 and some people could drop too low if they don't eat enough food or don't enough protein and that should be considered as well. But for most of us in the center of our lives between the ages of 20 and 80, IGF-1 should be as low as possible. And the point I'm making is that, animal protein drives up IGF-1 too high. And any diet high in animal protein whether it be egg whites or white meat chicken or even fish, can drive IGF-1 into unfavorable levels.

Sam: So I would like to know in a lot of I guess diets or people wanting to lose weight or get healthy, it is recommended that they have

certain animal protein in a lot of meals that they're eating, not just one meal, but a lot of meals they're eating the day. Why is that? And what could we replace that with or how could we look at that differently if people are so sowing grain to do that, to lose weight?

Dr. Fuhman: People are bombarded with information. And everybody quotes some study or some reason or some philosophy to support the way they want to eat. And people will choose whatever food they will prefer to eat. They'll choose that nutritional guru to support their view point of the way they want to eat. And unfortunately I was suggesting that the diets are high in animal products are irresponsible and somewhat profoundly ignorant and dangerous. And I think those people should be put in jail.

And I'm just kidding. But the point is that, people are looking for a reason or a rational to eat the diet they prefer to eat. And the evidence today is overwhelming that diets higher in animal products are dangerous. So I'm suggesting that there's no controversy here. That there are soft intermediate end points and there are hard long-term endpoints.

Soft intermediate endpoints means, we feed a diet that's high in animal products, restricted in carbohydrates and refined carbohydrates. And we see a person loses weight, their blood sugar gets better, their cholesterol and triglycerides go down, they look healthier great that diet is healthy. That's a soft end point.

It may indicate the diet is healthy, but we don't know that because we just have some markers and some little short term weight loss and we're thinking because that's what's happening, it might be good

to live on this diet long term. But then we have studies that take like 100,000 people and they followed them for 20 years and they're not only looking at soft endpoints like cholesterol levels, but they're looking at hard endpoints like death, like getting cancer, or heart attack or dying.

And all those long-term studies with hard endpoints show that when people with diet high animal products, they have increased risk of death from cancer and increased risk of death from heart attack and they die younger. They lose lifespan. And we have to give more weight to those studies that follow people for many years and look at death rates.

And I'm saying that there's not one study. For example, there's a study with 6,000 people followed for 18 years, showing a 75% increase risk of death over their 18-year period in the 50 to 60 age range. Let me say that again, that these participants in the study were between ages of 50 and 65 when they started the study and then they followed them for 18 years.

And over that 18-year period, those that were averaging about 30% of calories in animal products had a 75% increased risk of death over the 18-year period compared to those that were eating less than 10% of calories and animal products. So that's clear and definitive, but that's only 6,000 people followed for 18 years. But then we have other studies subsequent to that followed more than 100,000 people for an average of 25 years. And we saw the same thing. And we saw that as the animal products go up in a person's diet, in a percentile of increase, so do these causes of death.

And we know that animal products do not contain the phytochemicals, the antioxidants, the fiber, that

protects us against cancer. And we know that animal products drive up hormones like IGF-1, that accelerate death. So we know the mechanisms. We understand the problems and we have the hard data with hard endpoints over long term.

And to deny that that exists and that those studies are real, is just profoundly ignorant and irresponsible at this point. If you would love to eat animal products, and you don't want to be a vegan, I'm not suggesting that that's necessary, then the percentile of animal product a person utilize in their diet, should be held to below 10%. And if you have a serious illness you should perhaps consider, holding it to below 5% because we have, how should I say this? We cannot just prevent heart attacks and strokes, but people with advanced heart disease can reverse it and they can reverse the wrath of sclerosis and get off their blood pressure medications and cholesterol lowering drugs and diabetic medications.

And that reversal is facilitated by a diet rich in greens and beans and nuts and seeds and vegetables and berries. So your diet should be designed out of the healthiest foods in the world. And the healthiest foods in the world are an assortment of colorful plant foods. Our diet should be plant predominant. And I coined a word and I call it nutritarian.

My nutritarian diet is designed to maximize human lifespan, to accelerate healing and to be rich in nutrients and complete nutrients. You can be a nutritarian on a vegan diet or you could be a nutritarian on a diet with some animal products. But the animal products are used as condiments in small amounts as flavorings into supplement nutrients instead some nutrients to the diet, but not as the major source of calories to drive IGF-1 too high.

Sam: Nutritarian I love it. And how do you think fasting comes into that?

Dr. Fuhman: Fasting can be incorporate into a person eating healthily in different ways. Number one, a person could use short term fasting. We're talking about I presume water fasting, water only fasting with clean water or could be a juice fast, but mostly we referring to water fasting as giving yourself a rest every few months. Just taking a few days off from eating. Or perhaps fasting longer like fasting a week, but doing that throughout your life maybe once a year or so to take some time off work and to fast for some extended period of time.

So I do think that fasting as an adjunct can be utilized to extend human lifespan. But again, I'm careful to frame this in the context of a healthy diet. If people don't get this diet thing, I don't think they should even be thinking about fasting.

Sam: You speak a lot about reversing and healing and people being able to do that. What type of fast would you suggest for that? And maybe what examples can you give to people of this happening with some cases that you've worked with?

Dr. Fuhman: Well, that's the thing. Juice fasting can be utilized and it can be a way that some people with diseases such as rheumatoid arthritis or idiopathic urticaria like Joe Cross from Australia. Did you ever see that move with him juice fasting?

Sam: Yeah.

Dr. Fuhman: So sometimes when a person for a long period of time juices, they remove proteinaceous antigens. They remove food particles and proteins going through the gest tract wall that can

excite a new response. And it allows their autoimmune disease to come down. In some cases, water fasting is even more, how should I say? More therapeutic for people whose immune system are hyper excited.

Because it doesn't just stop the antigens, it also can cool down the immune system because caloric restriction can lower excessive immune response and have this person accelerate the clearing of their psoriasis, get rid of their urticaria, rest the digestive tract, get them free of pain from rheumatoid arthritis. So we're talking now about autoimmune disease.

And fasting, I've utilized it over the last 25 years. Many cases to people with autoimmune disease. But again, I started them off on the right diet first. Flood their body with the nutrients. And some people can't water fast because they can't take the time off from work. And water fast makes you too weak and you have to mostly take it easy around the house and rest in bed. And they can't do that more than a few days.

So we use the juicing to enable them to still function and still go to work, to extend the period of their fast. And they may utilize water fasting on the weekends and then juice fasting during the week because they can still produce a little bit of their work and give themselves digestive tract rest. And then we slowly reintroduce food with foods that are easy to digest.

And we're going to do, how should I say? It's called like an elimination diet. It's give foods, but track what we're giving them and see if they're feeling okay with it before we add another food and then feel that they're okay with that and then add another food.

So they can utilize that over the years. And I've had many patients with psoriasis and psoriatic arthritis

make complete recoveries. Many patients with rheumatoid arthritis, mixed connective tissue disease, autoimmune hepatitis, ulcerative colitis and Crohn's disease and lupus of course. We're talking about serious diseases and in some cases lupus can be life threatening.

And using superior nutrition and incorporation and in conjunction with some judicious use of fasting, can enable these people to make a complete recovery, not require medical care and not requiring drugs for their condition because they don't have their condition anymore, they made a complete recovery. And why this should be the, how should I say, the primary method of treatment and drugs should be seen as almost a last result after the few rare cases that this would fail. Because drugs not just are toxic, but they cause other cancers to occur. They dramatically enhance your rate of getting cancer. They're dangerous medications and suppressing the immune system is very dangerous with drugs. It's lifespan shortening.

And then you keep people sick their whole lives having to take drugs with serious side effects. So I think of the many people that have recovered from autoimmune diseases with my methodology. And is using these techniques are just tremendously appreciative, grateful, the fact that it's completely changed their lives. They suffered their whole life and meant to make a full recovery is dramatic and just remarkable to them.

I remember one of my patients Jody got rid of her psoriatic arthritis. And one of her getaways and she climbed to the top of a mountain, threw her hands up in the air and said, "Look at me I'm a medical miracle." She couldn't walk for 20 years, she couldn't do anything for 20 years now she's climbing mountains. So it's so incredible to

watch these people get well.

Sam: Absolutely. And what about diabetes?

Dr. Furhman: Well, we're talking here about type 2 diabetes which is usually people are overweight and we want to get them off their medications and get rid of their diabetes. And with my diet approach to diabetes, I've even written studies in the medical literature showing that 90% of people adopting this approach get rid of their diabetes.

And I don't utilize fasting in that protocol. I don't normally utilize fasting in that protocol because I usually don't need it. It's because we want them to be thin, we want them to exercise regularly and fasting can be utilized at some point, but it's not the primary modality. In other words, I don't really utilize fasting as a major therapeutic intervention for weight loss and for people who are obese or diabetic.

Because I want these people to learn a way to live and to eat that keeps them at a low weight the rest of their life. And wanting them to be very consistent and staying on this program and not doing anything radical. I want them to eat radically and stay with that radical aggressively and eating the rest of their life and keep their weight thin and keep exercising regularly. I want them to see this as a long term approach. Sure if you fast and quick fix you get them off their drugs, but then they're going back. I really want them to get consistence so I don't think I would normally utilize fasting for those patients. And I should mention that I have type 1 diabetic patients who've come to me when they were first diagnosed between the ages of five years old and seven years old.

Now these type 1 diabetics if I've jumped on them right away with a

nutritarian diet and convinced these children to eat only natural plant foods and eat really super healthy, these cases can be reversed. And I'm seeing right now in my practice a couple of people right now currently with little kids who are amazingly compliant, eating perfectly healthy, wouldn't touch anything, that are not using insulin any more. No insulin, no drugs and their sugars are well controlled.

And we're watching now their insulin levels go up and their body has been following. The body is being able to secrete more insulin naturally because they're staying on this program so strictly and their blood sugars are normal. And I'm watching their antibodies against the beta cells in the pancreas go down a little bit as time goes on. So I'm actually seeing some cases of type 1 getting well.

Sam: That's really interesting. And do you help families make those changes in an easy way? Because you know how in today's society especially for kids it's hard to be strict with that type of thing, going to birthday parties or being looked at a certain way. Do you help them be able to implement into their lives so it's not, from a kid's perspective, that they're being restricted of this, but it's actually they're choosing that way of life?

Dr. Furhman: I understand what you're saying. I wrote a book, *Disease-Proof Your Child* that tells parents how to make healthy delicious food for kids. And kids love eating healthy and they get it, they understand. And so I'll often say to a child coming in with a problem to my office and I'll say, "You're a kid and you have not had years and years of being addicted to these dangerous foods that can cut off your life like cause heart attacks and cancer.

And I need your help to get your parents healthy because your parents have been eating these unhealthy foods for so long and they're committing suicides with foods. And I know you love your parents. And we've got to work together to get your parents on a healthy diet because they're really so confused that they're so addicted and they're so adjusted themselves eating unhealthy. It's hard for them to change, but you and I can help them change because I know you love them and not want to make them not have a heart attack. Because your father is in terrible shape, your mother is in horrible shape." So I'll take the emphasis off the child, because it's true. And I'll enlist the child's help. And watching the parent, he eats healthily and makes sure the parent doesn't bring unhealthy foods for them to eat unhealthy in the house.

And it has the effect to, the kid who starts is going to eat healthy just naturally to want to get his parents to eat healthy, you know what I mean? I often begin that in the process because the biggest sabotage the biggest impediment to a child eating healthy obviously it's their parents. If the parents weren't buying these stuff and bringing home the kids would be eating unhealthy to begin with. How they developed the taste for these unhealthy foods.

Of course any animal, a squirrel, a monkey, a child if you feed them junk food over good food over a vegetable, they might pick the junk food. They're going to stop eating all the vegetables and just eat the highly palatable, highly sweetened, highly calorically dense food that's going to be unhealthy. The minute you put that food into the environment...I'm writing a book now called *Fast Food Genocide*. One of the pictures in the book is a family shipwrecked on a tropical island with their ship sinking the

distance. And the family says, "Look at the bright side. At least we could follow Doctor Furhman's diet now."

Sam: Nice one. That's a really interesting thing because even as an adult you have struggles like that in life now. Like having to really make that choice and really stick to your guns and not be influenced from things around you.

Dr. Furhman: Absolutely. But the point I'm making even with the joke is that, you want to make your household a healthy island. You want to not bring unhealthy food into the house. So if you're eating something unhealthy or your child is eating something unhealthy, you know it's only going to occur in somebody else's house or it's not going to occur in your house. In your house you have all kinds of healthy food choices.

So when you're looking for something to eat, you open refrigerator or the cupboard it's just nuts and you've got all kinds of vegetables and soups and stews and salads and healthy dressing. So you've done everything to make your house be filled with healthy food. That's the most critical thing.

Sam: You mentioned before. I think you said when you fast you slow your metabolism down, is that right?

Dr. Furhman: Yes.

Sam: I think we've learned a lot now that you want to make your metabolism go fast because that's what's used to help keep the weight off and things like that. Can you touch on that a little bit because I know you talk about conception on metabolism?

Dr. Furhman: Yes. As you're probably aware I don't agree with that way of thinking because the

faster your metabolism is, the faster you're aging your body. And one of the problems with conventional food of eating excess amount and concentrated calories like oils is that you gain weight but it also speeds up your metabolism. So when you eat a healthy diet and you eat less calories and you fast, it slows down your metabolism.

And it means you're aging slower and you don't need as much food to maintain your weight. So yes. If you eat conventional foods you'll get fat with your metabolism slow, but you can eat less food and not get too thin. The point I'm making is, your lifespan is extended when you eat less foods through your life. So if you could exercise and maintain your muscle size and your muscle mass and athletic capabilities without having to overeat food, then you're going to eat longer.

I noticed when I go skiing all day, I love to snow ski or play tennis, so I'm very heavily physically active, my friends have to eat more calories, have to eat more food. I can get by with less food and not lose weight. I don't have to stuff my face. My metabolism is so efficient. Now, I'm saying that fasting could drive your metabolism even too slow, but it will come back to normal again in a few months. It is very important after a fast a person mildly under-eats and is very careful with overeating, but they don't gain their weight back too quickly. You gain your weight back with weightlifting and exercising and you allow the weight to come back gradually, but there's no rush to get it to come back. And if your metabolic rate stays a little slower than normal because you eat so healthily that's great. You can lower the cost of your food bill. The point is, you want your body weight to stay stable. You want to be hungry a little bit.

Sometimes I'll eat dinner at 3 or 4 o'clock in the afternoon and I'll start to feel a little hunger at night, at 9 or 10 o'clock at night. I don't go down and eat another meal, I go to bed and wake up in the morning I'm hungry. In other words, you're mildly under-eating calories, being conscious of not overeating. Picking foods that are rich in nutrients that supply caloric needs are all, how should we say it, the formula for expanding human lifespan. That's the fountain of youth. Having a mildly reduced metabolic rate. When you try to eat high nutrient foods with less of them and not getting yourself to be too heavy, without getting too thin either of course. And keeping your weight stable and muscular, that's the secret to living a long healthy life.

Sam: That's awesome. That's really informative because I think so many people are taught the opposite.

Dr. Fuhman: They're looking for fads and gimmicks and tricks to speed up their metabolic rate so they can eat more food and not get too fat. That's not a formula for lifespan expansion, that's a formula for shortening lifespan, looking for tricks so you can eat more food. We can't be healthy eating more food. We have to eat healthy eating. And that's the same thing with snacking. Because we're talking here about fasting and we extend human lifespan by extending the fast every night. If you can extend the fast by 13 or 14 hours you're going to extend your lifespan.

In other words, eat dinner earlier and eat breakfast a little later. Go for 13 hours or more where you haven't eaten food all night. That makes you live longer. It reduces your risk of cancer. The people who snack and eat late at night and eat all day and all night long. They're thinking the more frequently they eat the better, that's not a great idea. The opposite is true, that the

less frequently we eat, we want to eat when we're hungry, try to occupy our lives with fun activities and intellectual pursuits and doing good for the world when we're not eating food. And not keeping foods in our mouth all day long.

Sam: Love that. That's really awesome. And is there anything else that you feel like you need to add on fasting for either health or healing for the listeners out there?

Dr. Fuhman: So one thing we didn't say is that, water fasting could increase a person's risk of getting low blood pressure and fainting and falling down and smacking their head or breaking their arm. And that it's important to know that fasting lowers blood pressure dramatically so and can you make you light headed and fall. And that's the main danger of a fast, is the fact that you can hurt yourself in a fall. You don't just bang, faint in one millisecond. You get a little light headed first and you feel a little woozy and then you faint and hurt yourself.

And the point is that a person who's fasting should recognize that if they feel a little bit light headed, they have to get down to the ground as fast as they can before they faint. So they have to know about the major precaution of fasting, is to get down on the ground if you feel light headed, immediately. Don't wait because waiting a second or two can cause yourself to faint. So that's the main thing.

And the second thing is that, we certainly don't want to put fast people when they're on drugs which are toxic. They have to be healthy enough to be off medication in most cases before they start to fast. So they have to eat really healthy enough to be able to earn the right to not to need those medications. So not to need much medication

that we can stop or ease down when they start to fast.

And the other thing is that, if they have a serious medical condition or they're considering a prolonged fast, they should do so under supervision of a expert or professional who knows more about fasting. So in other words, they should be cautious with this modality. And I do recommend people read my book about fasting, *Fasting and Eating for Health* because even though it was written 20 years ago, there's a lot of great information in there that still holds true today and being able to understand the safety and what to monitor and how to fast properly.

I'm recommending of course my more recent book which is called *The End of Dieting* which I think would be great for this audience because they get a good understanding of the yo-yoing and the metabolic rate. Because that's a recent book written in the last year or two to bring them up to date with more modern science.

Sam: Absolutely. And I was going to say that exact thing like if people are looking at how to do it, then you've got plenty of books out there that they can read and get that information. I'm sitting here with so much information and just feeling baffled about why there's not more people and more doctors like you in the world. To me it's so much common sense and everyone's taught so differently. So it's really great that you're able to spread this message.

Dr. Fuhman: Thank you and I appreciate that. And I also feel the same way you do, that why are there so few doctors that have this as the primary modality of their practice. It's growing, but why are there still so few of us? It has to do with social, political, economic factors that cause, historically,

how this developed. The last 100 years how giving drugs for medical problems became the primary modality of medical care and how that occurred as a major story.

But it just happened that way in history and now we've got to try to undo it and get people back to living healthy life. And we have to really reach out to the masses and reach out to the population and motivate and educate and support people who want to live a healthy life.

And of course at my website I have recipes and educational information and Ask the Doctor forums, and people to support and they talk to each other and communicate and support each other. So I've been that here in the States just trying to motivate, teach and give people support and connectivity with other people doing this so they can really feel they're not alone in trying to live a healthy life.

Sam: Absolutely. And we'll link that up because everyone needs to get onboard with that. I found for me, sometimes you feel like it's this lonely journey and you're confused because it's so much new information out there that you just don't understand. But when you can connect to a community and when you have people like yourself doing what you're doing and spreading this information, things are changing, and it's great.

And we need to be a part of that and everyone needs to do their part in spreading this message. So I really thank you. I wish we had more time today because I know there's so much more that you could talk on. But I really thank you for joining me and I know everyone will learn so much information just from your short talk today.

Dr. Fuhman: Thank you. Pleasure.



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